

quires the nation's support as much as the nation needs science. This view, of course, may offend those who would seek to keep basic research pure, requesting support of science for its own intrinsic rather than extrinsic merits. The growing estrangement between the scientific community and our society is proving harmful. The scientist's argument of "technology push" is no more an appropriate answer than is the bureaucrat's reliance on "demand-pull." It is time the scientific community and the government decline together that which neither can do alone.

For too long there has been inadequate communication between the academic scientist, those involved in industrial applications, and federal administrators. Much of the present situation is traceable to a lack of understanding of purpose and several decades of undelivered promises (both real and imagined). The Joint Economic Committee of Congress will soon be holding hearings to examine the process of research, technology development, and innovation in industry and the efficacy of federal policies to foster their progress. I expect these hearings will provide ample evidence of the most primitive form of cultural gap among participants.

The PHYSICS TODAY editorial is a remarkable example of such a gap. It suggests "the first steps towards achieving (a rational science policy) should be to make sure scientists themselves are fully aware of the perilous situation for basic research and motivated to seek action." I would propose rather that the scientific community should seek to understand better the role and importance of basic research in the nation. Individual scientists should transform themselves into the rest-frame of the policy-maker and industrialist to seek to appreciate their perspective and their expectations. From such a "consciousness-raising" experience, the physics community might be better able to determine its responsibilities, articulate its "rights," and communicate with those outside—and in the long run, play an important role in defining a more responsive science policy so necessary for its continued welfare.

MARTIN J. COOPER  
General Electric Company  
Schenectady, New York

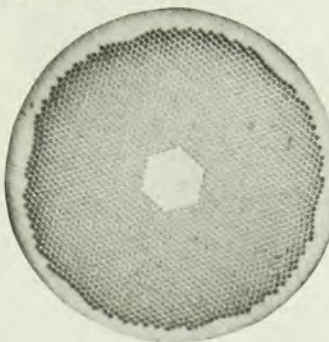
## Corrections

October, page 62—The author of *Physics and Chemistry in Space, Vol. 8: Plasma Instabilities and Nonlinear Effects* is A. Hasegawa.

November, page 50—Photo at top shows Gordon Baym on the left and Douglas Scalapino on the right. □

# Announcing IGC's CRYOSTRAND-Ti™

DO RELIABILITY AND DELIVERY OF Nb-Ti WIRE FOR YOUR SUPERCONDUCTING MAGNETS MAKE A DIFFERENCE? They do at Intermagnetics General Corporation (IGC), where high quality superconducting materials and record-breaking magnets are our business. That's why our commercially sold multifilamentary niobium-titanium CRYOSTRAND-Ti has these features:



## ■ Guaranteed Current

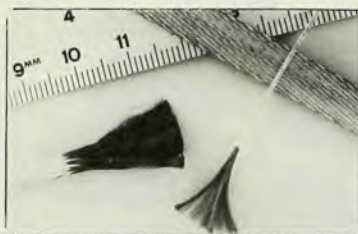
Filament integrity assures high current: the photo displays 2,000 uniform Nb-Ti filaments fully bonded to a stabilizing copper matrix (0.6 mm diameter CRYOSTRAND-Ti).

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| CRYOSTRAND-Ti AVAILABLE FROM IGC INVENTORY |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |             |
|--------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|
| Cu:Nb-Ti Ratio                             | 1.3:1           |                 | 1.65:1          |                 | 2.0:1           |                 | 2.45:1          |                 | 1.5:2:1         |                 |             |
| Cu-Ni:C:Nb-Ti Ratio                        |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |             |
| Number of Filaments                        | 348             |                 | 1,531           |                 | 438             |                 | 240             |                 | 156             |                 |             |
| Typical Diameters (uninsulated)            | mm<br>0.38      | mm<br>0.51      | mm<br>0.38      | mm<br>0.51      | mm<br>0.64      | mm<br>0.76      | mm<br>0.76      | mm<br>1.02      | mm<br>0.38      | mm<br>0.51      | mm<br>0.020 |
|                                            | inches<br>0.015 | inches<br>0.020 | inches<br>0.015 | inches<br>0.020 | inches<br>0.025 | inches<br>0.030 | inches<br>0.030 | inches<br>0.040 | inches<br>0.015 | inches<br>0.020 |             |
| Typical Short Sample Critical Current*     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |             |
| @ 50 kG                                    | 90 A            | 160 A           | 80 A            | 140 A           | 190 A           | 270 A           | 240 A           | 420 A           | 45 A            | 80 A            |             |
| @ 80 kG                                    | 45 A            | 80 A            | 40 A            | 70 A            | 95 A            | 135 A           | 120 A           | 210 A           | 20 A            | 35 A            |             |

\* Guaranteed values 10% lower.

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